

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT <i>ENGINEERING & COMPLIANCE</i> APPLICATION PROCESSING AND CALCULATIONS	PAGES 22	PAGE 1
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	PROCESSED BY: Cynthia Carter	CHECKED BY

<p align="center">PERMIT TO OPERATE (PO no PC, Admin Changes)</p>

COMPANY NAME, LOCATION ADDRESS:

ConocoPhillips, Facility ID 800363
1660 W. Anaheim Street
Wilmington, CA 90744

EQUIPMENT DESCRIPTION:

Additions or modifications to the equipment description are underlined and **bolded**. New and modified conditions are underlined and **bolded**. Deletions to the equipment description and conditions are noted in **strikeouts**.

Section D of ConocoPhillips' Facility Permit, ID #800363

Description	ID No.	Connected To	RECLAIM Source Type	Emissions* And Requirements	Conditions
PROCESS 1: FLUID CATALYTIC CRACKING					P13.2
SYSTEM 2: FRACTIONATION SECTION, FCCU 152					S4.2, S4.3, S13.6, <u>S13.12</u> , S15.2, S15.3
COLUMN, DEPENTANIZER , D-201, HEIGHT: 74 FT 11 IN; DIAMETER: 9 FT 6 IN A/N: 468687 <u>494936</u>	D16				
COLUMN, DEPROPANIZER, D-203, HEIGHT: 82 FT 4 IN; DIAMETER: 6 FT 11 IN A/N: 468687 <u>494936</u>	D17				
COLUMN, DEPENTANIZER , D-204, HEIGHT: 82 FT 1 IN; DIAMETER: 6 FT A/N: 468687 <u>494936</u>	D18				
COLUMN, DEBUTANIZER, D-205, HEIGHT: 82 FT 5 IN; DIAMETER: 7 FT 6 IN A/N: 468687 <u>494936</u>	D19				
VESSEL, D-206, POLYSULFIDE, HEIGHT: 67 FT 4 IN; DIAMETER: 10 FT A/N: 468687 <u>494936</u>	D20				
ABSORBER, D-207, P.P. H2S, HEIGHT: 56 FT 3 IN; DIAMETER: 4 FT A/N: 468687 <u>494936</u>	D21				

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Description	ID No.	Connected To	RECLAIM Source Type	Emissions* And Requirements	Conditions
PROCESS 1: FLUID CATALYTIC CRACKING					P13.2
COLUMN, DEETHANIZER, STRIPPER SECTION, D-651A, WITH 15 TRAYS, IDLED, HEIGHT: 49 FT; DIAMETER: 11 FT 6 IN A/N: 468687 494936	D22				
KNOCK OUT POT, F-12, HEIGHT: 16 FT; DIAMETER: 9 FT 6 IN A/N: 468687 494936	D25				
COMPRESSOR, GG-703, HOT GAS A/N: 460015 494936	D1503	Incorrectly listed in P1S1, moved to P1S2			
VESSEL, RECEIVER, F-14, HEIGHT: 16 FT; DIAMETER: 7 FT A/N: 468687 494936	D26				
VESSEL, RECEIVER, F-203, LENGTH: 22 FT; DIAMETER: 9 FT A/N: 468687 494936	D27				
ACCUMULATOR, RECEIVER, F-204, DEPROPANIZER OVERHEAD, LENGTH: 21 FT 1 IN; DIAMETER: 6 FT 10 IN A/N: 468687 494936	D28				
ACCUMULATOR, F-206, DEPENTANIZER OVERHEAD, LENGTH: 21 FT 1 IN; DIAMETER: 6 FT 10 IN A/N: 468687 494936	D29				
TANK, HOLDING, F-213, TOLUENE AO 37 INHIBITOR , LENGTH: 30 FT; DIAMETER: 3 FT A/N: 468687 494936	D30				
DRUM, HOLDING, F-711, AO 37 INHIBITOR DIAMETER: 2 FT 6 IN; HEIGHT: 8 FT A/N: 494936	D1810				
VESSEL, PP/MEA SEPARATOR, F-219, LENGTH: 15 FT 1 IN; DIAMETER: 4 FT 2 IN A/N: 468687 494936	D32				
TANK, HOLDING, F-653, DEETHANIZER FEED, LENGTH: 30 FT; DIAMETER: 12 FT A/N: 468687 494936	D33				

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Description	ID No.	Connected To	RECLAIM Source Type	Emissions* And Requirements	Conditions
PROCESS 1: FLUID CATALYTIC CRACKING					P13.2
TANK, SURGE, F-702, WASTE WATER, LENGTH: 11 FT 9 IN; DIAMETER: 6 FT 6 IN A/N: 468687 494936	D34				
ACCUMULATOR, RECEIVER, F-205, DEBUTANIZER OVERHEAD, LENGTH: 16 FT 7 IN; DIAMETER: 5 FT A/N: 468687 494936	D35				
VESSEL, COALESCER, F-455, LENGTH: 16 FT 4 IN; DIAMETER: 60 FT IN A/N: 468687 494936	D750				
COLUMN, DEETHANIZER, STRIPPER SECTION, D-650, WITH 28 TRAYS, HEIGHT: 74 FT; DIAMETER: 10 FT A/N: 468687 494936	D1671				
COLUMN, DEPENTANIZER, ABSORBER SECTION, D-651B, WITH 32 TRAYS, HEIGHT: 71; DIAMETER: 6 FT 6 IN A/N: 468687 494936	D1672				
<u>TRAP, SUCTION LIFT, F-651, HEIGHT: 2 FT; DIAMETER: 1FT 2 IN</u> A/N: 494936	<u>D1811</u>				
FUGITIVE EMISSIONS, MISCELLANEOUS A/N: 468687 494936	D1566			[HAP]: (10) [40CFR 63 SUBPART CC, #5A,5-25-2001	H23.3

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CONDITIONS

The following permit conditions shall apply in order to comply with all applicable District, State, and Federal standards. Additions and deletions to the conditions are noted in underlines and strikeouts, respectively.

PROCESS CONDITIONS

P13.2 All devices under this process are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
HAPs	40CFR61, SUBPART	FF

[40CFR 61, SUBPART FF, 12-4-2003]

[Processes subject to this condition: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 18]

SYSTEM CONDITIONS

S4.2 The following condition(s) shall apply to all affected devices listed under Section H of this system for fugitive emissions of volatile organic compounds (VOC):
All open-ended valves shall be equipped with cap, blind flange, plug, or a second valve.
All pressure relief valves shall be connected to closed vent system or equipped with rupture disc.
All process drains shall be equipped with water seal, or a closed vent system and control device complying with the requirements of 40CFR60 Subpart QQQ Section 60.692-5.
All sampling connections shall be closed-purge, closed-loop, or closed-vent system.
[RULE 1303(a)(1)-BACT,5-10-1996; 40CFR 60 Subpart QQQ, 5-5-1989]
[Systems subject to this condition: Process 1, System 2; Process 6, System 1]

S4.3 The following condition(s) shall apply to all affected devices listed under Section H of this system for fugitive emissions of volatile organic compounds (VOC):
All components are subject to District Rule 1173 and 40CFR60, Subpart GGG.
All new components in VOC service as defined in Rule 1173, except valves and flanges shall be inspected quarterly using EPA reference method 21. All new valves and flanges in VOC service except those specifically exempted by Rule 1173 shall be inspected monthly using EPA Method 21.
All new components in VOC service, a leak greater than 500 ppm but less than 1,000 ppm measured as methane above background as measured using EPA Method 21, shall be repaired within 14 days of detection.
Components shall be defined as any valve, fitting, pump, compressor, pressure relief device, diaphragm, hatch, sight-glass, and meter, which are not exempted by Rule 1173.
All new valves in VOC service shall be of leakless type, except those specifically exempted by Rule 1173 or approved by the District in the following applications: heavy liquid service, control valves, instrument piping/tubing, applications requiring torsional valve stem motion, applications where failures could pose safety hazards (e.g. drain valves with valve stems in horizontal position), retrofits with space limitations, and valves not commercially available.

If 98.0 percent or greater of the new valve and the new flange population inspected is found to leak gaseous or liquid volatile organic compounds at a rate less than 500 ppm

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for two consecutive months, then the operator may revert to a quarterly inspection program with the approval of the executive officer. This condition shall not apply to leakless valves.

The operator shall keep records of the monthly inspection (and quarterly where applicable), subsequent repair, and reinspection, in a manner approved by the District. The operator shall provide to the District, no later than 90 days after initial startup, a recalculation of the fugitive emissions based on the actual components installed and removed from service. The operator shall also submit a complete, as built, piping and instrumentation diagram(s) and copies of requisition data sheets for all non-leakless type valves with a listing of tag numbers and reasons why leakless valves were not used. For the purpose of this condition, leakless valve shall be defined as any valve equipped with sealed bellow or equivalent as approved in writing by the District prior to installation.

[RULE 1303(a)(1)-BACT,5-10-1996;RULE 1303(b)(2)-Offset, 5-10-1996]

[Systems subject to this condition: Process 1, System 2]

- S13.6 All devices under this system are subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1123

[RULE 1123, 12-7-1990]

[Systems subject to this condition: Process 1, System 1, 2; Process 2, System 1, 2, 3, 4, 5; Process 3, System 1, 3; Process 4, System 1, 2; Process 5, System 1; Process 6, System 1; Process 8, System 1; Process 9, System 1, 3, 4, 5, 6; Process 10, System 1, 2, 4, 5; Process 17, System 6, 7; Process 18, System 1, 2]

- S13.12 All devices under this system are subject to the applicable requirements of the following rules or regulations:**

<u>Contaminant</u>	<u>Rule</u>	<u>Rule/Subpart</u>
<u>VOC</u>	<u>District Rule</u>	<u>1173</u>
<u>VOC</u>	<u>40CFR 60 Subpart</u>	<u>GGG</u>

Compressor GG-703 (device ID D1503) is not subject to Subpart GGG per applicability date.

RULE 1173, 5-13-1994; RULE 1173, 6-1-2007; 40CFR 60 Subpart GGG, 6-2-2008]

[Systems subject to this condition: Process 1, System 2]

Note: New condition added to the system to show Rule 1173 and 40CFR 60 Subpart GGG applicability. Rule 1173 and Subpart GGG has been applicable since the CARB Phase III project and is under the device level condition H23.3

Since Compressor GG-703 will be moved to P1S2, this compressor is not subject to Subpart GGG because it was "constructed" before the applicability date.

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S15.2 The vent gases from all affected devices of this process/system shall be vented as follows:

All emergency vent gases shall be directed to a vapor recovery system or/and blowdown flare system except Devices IDs D1, D7, D210, D213, D214, D773, D775 TO D785 that vent to the atmosphere and Device ID D772 that normally vents to heater D1349 when hydrogen is being produced and vents to atmosphere when hydrogen is not produced.

This process/system shall not be operated unless the above air pollution control equipment is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 05/10/96; RULE 1303(b)(2)-Offset, 05/10/96]

[Systems subject to this condition: Process 1, System 1, 2; Process 2, System 1, 2, 3, 4, 5; Process 3, System 1, 3; Process 4, System 1, 2; Process 5, System 1; Process 6, System 1; Process 8, System 1, 2; Process 13, System 4, 6; Process 18, System 1, 2]

S15.3 The vent gases from all affected devices of this process/system shall be vented as follows:

All sour gases under normal operating conditions shall be directed to the fuel gas treating unit.

This process/system shall not be operated unless the fuel gas treating unit is in full use and has a valid permit to receive vent gases from this system.

[RULE 1303(a)(1)-BACT, 05/10/96; RULE 1303(b)(2)-Offset, 05/10/96]

[Systems subject to this condition: Process 1, System 1, 2; Process 2, System 1, 5; Process 3, System 1, 3; Process 4, System 1, 2; Process 6, System 1; Process 8, System 1, 2; Process 18, System 1, 2]

DEVICE CONDITIONS

H23.3 This equipment is subject to the applicable requirements of the following rules or regulations:

Contaminant	Rule	Rule/Subpart
VOC	District Rule	1173
VOC	40CFR60, SUBPART	GGG

[RULE 1173, 5-13-1994; RULE 1173, 6-1-2007; 40CFR 60 Subpart GGG, 6-2-2008]

[Devices subject to this condition: D253, D1566,D1569,D1571,D1589,D1621]

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BACKGROUND

ConocoPhillips Los Angeles Refinery operates a refinery as two separate locations in the city of Carson and Wilmington. At the Carson Plant crude oil is processed in the crude unit where it is heated and distilled into various hydrocarbon components which are further processed downstream at the Wilmington Plant. The Wilmington Plant is a major producer of fuel products, including gasoline for Southern California. This evaluation is for the Wilmington Plant where it is part of the SCAQMD NO_x and SO_x RECLAIM Program and is under the Title V permit.

This evaluation covers three (3) applications for the Fluid Catalytic Cracking Unit (FCCU) Fractionation Section as listed in Table 1. The modifications are as follows:

- to correct the facility permit.

During the 2003 Title V cleanup process, ConocoPhillips discovered a holding drum (F-711, new Device ID 1810) was not included in the list of equipment. According to ConocoPhillips' Senior Operator, the holding drum was recycled from their Alkylation Unit (originally built in 1943) and was installed in the FCCU in 1970. Additionally, during the current permitting process, the operator was referencing another vessel (F-213) to have the same material as F-711, an inhibitor, but according to the permit, the vessel is permitted to have toluene instead of AO 37 Inhibitor. (See [Attachment I](#) for AO 37 Inhibitor's MSDS) Thus, another application was submitted to correct the permit description for vessel F-213 (Device ID D30). For this reason, the facility permit will now be corrected for both devices.

A correction to device ID D750 Coalescer Vessel F-455 from 60 ft to 60 in (or 5 ft) will be made. This corrects a typographical error in the facility permit.

Another application deals with adding an existing (new device ID D1811) Suction Lift Trap, F651 to the facility permit. This device was listed on the old command & control permit (M57897, A/N 127383), but it did not transfer to the RECLAIM facility permit (see [Attachment II](#)). Therefore, the device will be added to the facility permit.

During the FCCU Energy Reduction Project permitting process (cancelled A/N 478297), it was noted that the hot gas compressor D1503 was incorrectly listed in P1S1 and should be moved to P1S2. The facility permit will now be corrected at this time. See [Attachment III](#) for more details.

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Table 1-AQMD Submitted Applications

A/N	Date Received	Previous A/N	Equipment	Device ID	Facility's Requested Action
411445*	2/4/2003	478297	FCCU- Fractionation System 2	D1810	<ul style="list-style-type: none"> To add Vessel F-711 to the permit
485347*	7/15/2008	478297	FCCU- Fractionation System 2	D30	<ul style="list-style-type: none"> Change permit description to list AO 37 Inhibitor instead of toluene (PO no PC)
494936 MASTER APPLICATION	1/15/2009	478297	FCCU- Fractionation System 2	D750, D1811, D1503	<ul style="list-style-type: none"> Correct diameter on Coalescer Vessel F-455 from 60 ft to 60 in Add Suction Lift Trap F-651 to the permit Move hot gas compressor to P1S2 from P1S1
485348	7/15/2008	N/A	RECLAIM Permit Amendment	N/A	N/A

*Note: Because there's an open application for the same permit unit (P1S2), these applications will be cancelled.

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PERMIT HISTORY

Table 2 lists the permitting history submitted along with the modifications. An extensive permit history was done because the SCAQMD's Permit Administrative and Application Tracking System does not show the correct history.

Table 2- Permit History for FCCU Fractionation System

Permit to Construct		Permit to Operate		Description of Modification
A/N	Issue Date	A/N	Issue Date	
Z02787	Unknown	N/A	N/A	<ul style="list-style-type: none"> No application found. A/N is according to PAATS
103053	March 22, 1983	N/A	N/A	<ul style="list-style-type: none"> Remove 9 compressors, 2 de-ethanizer columns, 7 shell and tube heat exchangers, 4 vessels, and 8 pumps Install deethanizer column with relief valve, condensers, debailer, drums, and several pumps
126520	November 16, 1984	N/A	N/A	<ul style="list-style-type: none"> Added second interstage condensate pump
127383	March 1, 1985	N/A	N/A	<ul style="list-style-type: none"> Cancelled and merged w/ subsequent application A/N 198161
198161	November 16, 1989	198161	May 28, 1991	<ul style="list-style-type: none"> Replaced pumps G223 & G223S
248319	July 30, 1990	N/A	N/A	<ul style="list-style-type: none"> Revamp fractionation section (cancelled by Unocal)
263370	February 27, 1992	263370	April 7, 1995	<ul style="list-style-type: none"> Revamped fractionation section by the addition of exchangers, vessels and pumps
326690	July 7, 1997	N/A	N/A	<ul style="list-style-type: none"> Change of Ownership
376891	April 16, 2001	N/A	N/A	<ul style="list-style-type: none"> CARB Phase 3 added De-ethanizer Stripper Column (D1671, D1672, D22)
N/A	N/A	468687	June 12, 2007	<ul style="list-style-type: none"> Removed aqueous ammonia tank (device D31)
478297	--	--	--	<ul style="list-style-type: none"> FCCU Energy Reduction Project (cancelled per COP's request)

COMPLIANCE RECORD REVIEW

As of August 10, 2010, a check of the AQMD Compliance Database for the past two years showed that this facility was issued 10 Notices of Violation (NOVs) and 1 Notice to Comply (NCs). None of the NOVs and NCs are related to the subject equipment. For detailed violation descriptions, refer to Appendix A.

Enforcement is aware of Tank F-213's modification without a permit (PO no PC). See A/N 485347 for correspondence. If necessary, Enforcement will decide to take any further action.

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PROCESS DESCRIPTION

Existing Vessel Added to the Permit:

Tank F-213 is the storage tank for Antioxidant No 37 Dilute (AO37 Inhibitor). This tank then fills a pressure vessel, F-711 which is called the day tank, with a relief valve set at 15psig. If needed, the relief vent goes to the refinery vapor recovery system. Rates on tank F-711 with a relief system is monitored and is used to prevent off-spec light catalytic cycle oil. If the rate is too low, gum formations will form. Under normal filling operations there is no over pressuring of the vessel and no emissions are generated. (See [Attachment I](#) for MSDS)

FEE SUMMARY

The fees paid for the submitted applications are as follows:

A/N	Equipment	Type	Fee Schedule	Fee Required	Fees Paid	R301 Amend Date
485347	FCCU Fractionation System 2	94	--	\$609.54	\$609.54	5/2/2008
411445	FCCU Fractionation System 2	30	--	\$2,167.92	\$2,167.92	5/3/2002
494936	FCCU Fractionation System 2	63	--	\$670.50	\$670.50	5/2/2008
485348	Title V Facility Amendment Fee	80	--	\$1,687.63	\$767.09	5/2/2008
TOTAL:				\$5,135.59	\$4,215.05	
				Net Fee Due:	\$920.54	

*ConocoPhillips paid the RECLAIM facility amendment.

The Title V amendment fee will be charged when the permit is issued.

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EMISSIONS CALCULATIONS

Please note that the emissions remain unchanged as a result of this permit action.

The following table shows the FCCU's System 2 summary of VOC emissions.

Table 3: VOC Emissions

		<i>lb/yr</i>	<i>lb/day</i>
494936	FCCU-System 2	21,515.23	59.76**

***The total component counts between 2002 and now are different because ConocoPhillips completely recounted and retagged all components in 2005. All components were existing. The emissions will be corrected at this time for the previous application A/N 468687 to reflect the emissions from the additional components. Since the components were added during CARB's Phase III project, no offsets are required. Therefore, there will be no emission increase reflected in this application (A/N 494936) For detailed calculations, please refer to A/N 487297.*

Compliance with Permit Conditions

Process 1: Fluid Catalytic Cracking- System 2: Fractionation Section, FCCU 152

- | | |
|-----------------------|--|
| Condition P13.2 | This permit action will not affect the existing ability to comply with 40CFR61. |
| Condition S4.2 & S4.3 | All fugitive components comply with BACT, Subpart GGG and Subpart QQQ, as required. |
| Condition S13.6 | This permit action will not affect the ability to comply with Rule 1123. |
| Condition S15.2 | This permit action will not affect the existing routing of any systems to the blowdown flare system. |
| Condition S15.3 | This permit action will not change the existing routing of sour gases. |
| Condition H23.2 | All fugitive components comply with Rule 1173 and/or Subpart GGG, as required. |

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RULES EVALUATION

PART 1 STATE REGULATIONS **California Environmental Quality ACT (CEQA)**

CEQA requires that the environmental impacts of proposed projects be evaluated and that feasible methods to reduce, avoid or eliminate identified significant adverse impacts of these projects be considered. The CEQA Applicability Form (400-CEQA) indicates that the project does not have any impacts which trigger the preparation of a CEQA document.

A significant project^a is one associated with the emissions levels listed below, during the operation phase of the project:

CO 550 lbs/day
VOC 55 lbs/day
NO_x 55 lbs/day
SO_x 150 lbs/day
PM₁₀ 150 lbs/day

The expected impacts of the permit action on the environment are not significant: therefore a CEQA analysis is not required.

PART 2 SCAQMD REGULATIONS

Rule 212: Standards for Approving, Amended November 14, 1997

- 212(a): This permit modification of the FCCU Fractionation Section will not generate air contaminants in violation of the provision of Division 26 of the State Health & Safety Code or District rules.
- 212(c)(1) This facility is not located within 1,000 ft of any school.
- 212(c)(2): A 30-day public notice is not required since the emissions increase does not exceed the daily maximum specified in subdivision (g) of this rule (VOC: 30 lbs/day)
- 212(c)(3) The permit modification of the FCCU Fractionation Section does not have an increased cancer risk greater than, or equal to, one in a million (1×10^{-6}) during a lifetime of 70 years or pose a risk of nuisance.
- 212(d): Not required because the equipment is exempt from c(2) and c(3) of this rule.
- 212(e): Not applicable.
- 212(f): One of the applications is a PO no PC. The modification does not trigger a public notice.
- 212(g): Not applicable since the permit modification of the FCCU Fractionation Section do not result in emission increase.
- 212(h): Not applicable.

^a Source: SCAQMD CEQA Handbook (SCAQMD, 1993)

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Regulation IV PROHIBITIONS

Rule 401: ***Visible Emissions, Amended November 9, 2001***

No visible emissions are expected under normal operating conditions; therefore continued compliance is expected.

Rule 402: ***Nuisance, Adopted May 7, 1976***

No nuisance complaints were made and are not expected provided that the operation is conducted according to design. Continued compliance with Rule 402 is expected.

Rule 404: ***Particulate Matter- Concentration, Amended February 7, 1986***

This rule requires particulate matter discharged into the atmosphere be less than the standard listed in Table 404(a) of this rule. This permit action will not increase nor emit PM emissions. Therefore, continued compliance is expected.

Rule 405: ***Solid Particulate Matter - Weight, Amended February 7, 1986***

This rule is for no person to discharge any solid particulate matter into the atmosphere from any source. This permit action will not increase mass PM emissions. Therefore, continued compliance is expected.

Rule 467: ***Pressure Relief Devices, Amended March 5, 1982***

This rule requires refineries not to use PRD's in VOC service unless it is vented to a VRS or disposal system or inspected. This permit modification did not install any new PRD's in VOC service; therefore, continued compliance with Rule 467 is expected.

Regulation XI - SOURCE SPECIFIC STANDARDS

Rule 1173: ***Fugitive Emissions of Volatile Organic Compounds, Amended February 6, 2009***

This rule applies to fugitive VOC components at refineries, chemical plants, oil, and gas production fields, natural gas process plants and pipeline transfer stations. This rule specifies leak control, identification, operator inspection, maintenance, and recordkeeping requirements for valves pumps, compressors, pressure relief valves, and other components from which fugitive VOC emissions may emanate.

This permit modification to the FCCU's Fractionation Section already incorporated the fugitive components that are subject to Rule 1173. The fugitive components will be subject to the leak, identification, operator inspection, maintenance and recordkeeping and reporting requirements. ConocoPhillips already includes the subject equipment's components into their inspection and repair/maintenance (I &M) program.

ConocoPhillips is expected to continue to comply with Rule 1173.

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Regulation XIII: NEW SOURCE REVIEW

The requirements of Rule 1303 do not apply because this permit action does not result in an emission increase of any nonattainment air contaminant, any ozone depleting compound, or ammonia.

Regulation XIV New Source Review of Toxic Air Contaminants

June 5, 2009

This rule requires permit applicants to assess the cancer risks due to the cumulative emission impacts of new/modified sources in their facility.

Requirements- Rule 1401 contains the following requirements:

MICR, without T-BACT:	≤ 1 in 1 million (1.0×10^{-6})
MICR, with T-BACT:	≤ 10 in 1 million (1.0×10^{-5})
Cancer Burden:	≤ 0.5
Maximum Chronic Hazard Index:	≤ 1.0
Maximum Acute Hazard Index:	≤ 1.0

Since this permit action is not considered to be a new permit unit, relocation, or modification that has an increase in emissions, this rule does not apply.

Reg XVII PREVENTION OF SIGNIFICANT DETERIORATION(PSD)

As of July 25, 2007, the USEPA signed a new Limited PSD Delegation agreement with SCAQMD. SCAQMD now has the PSD responsibility for all new PSD sources and all modifications to existing PSD sources where the applicant is requesting to use SCAQMD's existing Regulation XVII to determine PSD applicability for a modification (and not the recent calculation methodology adopted by EPA as part of the NSR Reform).

Since this permit action does not have an increase in emissions of any attained criteria pollutants, a PSD applicability is not required.

Reg XX: REGIONAL CLEAN AIR INCENTIVES MARKET (RECLAIM)

ConocoPhillips, Wilmington is a RECLAIM facility. Therefore, it is subject to Reg XX. Since this permit action will not result in an emission increase in RECLAIM pollutants, there are no RECLAIM requirements applicable to this modification.

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Title V

Reg XXX

ConocoPhillips has been designated as a Title V facility. On July 1, 2009, the initial permit became effective.

This permit action is considered to be a “Minor Permit Revision”. Meaning that the permit revision does not: require RACT, violate a regulatory requirement, require any significant change in monitoring terms or conditions in the permit, require relaxation of any recordkeeping, or reporting requirement, or term, or condition in the permit, result in an emission increase of RECLAIM pollutants, result in an increase of emissions subject to NSR or HAP, change a permit condition to avoid an applicable requirement, install a new permit unit subject to NSPS, or modify or reconstruct an existing permit unit resulting in new or additional NSPS and/or NESHAP requirements

Since this proposed permit is applicable for a minor permit revision, R3003(j)(1)(S) requires an EPA 45 day review.

Therefore, the requirements of this regulation have been met and ConocoPhillips is expected to continue to comply.

PART 3 FEDERAL REGULATIONS

40 CFR Part 60 Subpart GGG Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After January 4, 1983, and on or Before November 7, 2006

§60.590 Applicability and designation of affected facility. In accordance with §60.590(b), any affected facility (petroleum refinery) that commences construction or modification after January 4, 1983 and on or before November 7, 2006 is subject to the requirements of this subpart.

Since the Fractionation System has been subject to Subpart GGG (except Compressor device ID D1503), it will continue to be subject to this regulation.

§60.592 Standards.

(a) The facility shall comply with the requirements of §§60.482-1 to 60.482-10 as soon as practicable, but no later than 180 days after initial startup. §§60.482-1 to 60.482-10 refers to Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry and sets standards for the following:

- §60.482-1 Standards: General
- §60.482-2 Standards: Pumps in light liquid service.
- §60.482-3 Standards: Compressors

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40 CFR Part Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries
60 Subpart for which Construction, Reconstruction, or Modification Commenced After
GGG January 4, 1983, and on or Before November 7, 2006

- §60.482-4 Standards: Pressure relief devices in gas/vapor service
- §60.482-5 Standards: Sampling connection systems.
- §60.482-6 Standards: Open-ended valves or lines.
- §60.482-7 Standards: Valves in gas/vapor service and in light liquid service.
- §60.482-8 Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors.
- §60.482-9 Standards: Delay of repair.
- §60.482-10 Standards: Closed vent systems and control devices.

All fugitive components in VOC service are expected to meet the equipment standards and monitoring requirements in §§60.482-1 to 60.482.10. In general, the equipment leak inspection and monitoring requirements of this regulation have been incorporated into ConocoPhillips' Inspection and Monitoring (I&M) Program for fugitive emissions. All components associated with the equipment will be monitored on a monthly and quarterly basis by refinery personnel. It is expected that ConocoPhillips will continue to comply with the inspection, maintenance, and recordkeeping requirements of this rule.

(b) The facility may elect to comply with the requirements of §§60.483-1 and 60.483-2.

- §60.483-1 Alternative standards for valves--allowable percentage of valves leaking.
- §60.483-2 Alternative standards for valves--skip period leak detection and repair.

Therefore, ConocoPhillips may choose between two alternative monitoring plans for valves: allowable percentage of valves leaking or skip period leak detection and repair. ConocoPhillips shall notify EPA before implementing one of these alternative work practices.

(c) The facility may apply to EPA for a determination of equivalency for any means of emission limitation that achieves a reduction in emissions of VOC at least equivalent to the reduction in emissions of VOC achieved by the controls required in this subpart. In doing so, ConocoPhillips shall comply with requirements of § 60.484 (Equivalence of means of emission limitation).

(d) The facility shall comply with the provisions of §60.485 (Test methods and procedures) except as provided in §60.593 (Exemptions found in Subpart GGG). ConocoPhillips shall conduct all monitoring using EPA Reference Method 21 as stated in §60.485(b)(1).

(e) The facility is required to comply with the provisions of §60.486 (Recordkeeping requirements) and §60.487 (Reporting Requirements). The refinery will be required to submit semiannual reports to EPA beginning six months from initial startup with the information identified in §60.487(b) for the initial report and §60.487(c) for the subsequent semiannual reports.

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40 CFR Part 60 Subpart GGG Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After January 4, 1983, and on or Before November 7, 2006

A permit condition (H23.3) has been previously tagged to the Fugitive Emissions device D1566 for System 2 noting that all affected fugitive components are subject to 40CFR60 Subpart GGG. A new system wide condition has been added (**S13.12**) to be consistent with the other system conditions. Since Compressor GG-703 will be moved to P1S2, this compressor is not subject to Subpart GGG because it was installed before the applicability date. See PFD W-415-X-003 SH2 under [Attachment I](#) for location of compressor. The facility is expected to continue to comply.

40CFR Part 63 Subpart CC NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS)

Applicability: ConocoPhillips Wilmington Refinery meets both criteria of subparagraph (a)(1) and (a)(2) of this regulation. Basically, this refinery emits 25 tons or more of hazardous air pollutants (HAP) and is considered a major source as defined in section 112(a) of the Clean Air Act. Secondly, this refinery does emit some of HAP listed in table 1 of this regulation.

63.640(c)(1) Miscellaneous process vents: The permit unit list a Fugitive Emissions Device that is tagged with Subpart CC. Therefore, the requirements for miscellaneous process vents are applicable. The device is tagged with [HAP]: (10) **40CFR 63 SUBPART CC, #5A,5-25-2001**

63.640(d)(4): Catalytic cracking unit and catalytic reformer catalyst regeneration vent are not affect sources subjected to this rule. Hence, this subpart is not applicable to FCCU regenerators.

Because of §63.640(q), it allows the permitting authority (SCAQMD) to allow consolidation of the monitoring, recordkeeping, reporting requirements of this subpart overlap with SCAQMD (Rule 1173) regulations' monitoring, recordkeeping, reporting requirements.

Permit conditions requires continued compliance with this regulation.

40CFR Part 63 Subpart UUU NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS)

Catalytic Cracking Units, Catalytic Reforming Units and Sulfur Recovery Units

§63.1561 Applicability: ConocoPhillips Wilmington Refinery meets the criteria subparagraph (a) of this regulation. Basically, this refinery emits 25 tons or more of hazardous air pollutants (HAP) and is considered a major source as defined in section 112(a) of the Clean Air Act.

This regulation is not applicable because the regenerator is not in this permit unit.

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CONCLUSION:

Based on the above evaluation ConocoPhillips is in compliance with all required rules and regulations and is expected to continue to comply. ConocoPhillips is also in accord with the permit equipment and conditions (See [Attachment IV](#) for their approval). Therefore, it is recommended that a Permit to Operate be issued for the following applications:

A/N	Recommendation
494396 Master Application	Issue Permit to Operate with conditions listed in the Conditions Section
411445	Consolidate file with A/N 494396 and cancel application
485347	Consolidate file with A/N 494396 and cancel application
485348	Issue Title V Facility Permit Revision

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APPENDICES:

- A. Compliance Status for NOV/NCs

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APPENDIX A: COMPLIANCE STATUS FOR NOVS/NCS

NOTICE NO.	NOTICE TYPE	VIOLATION DATE	FOLLOWUP STATUS	VIOLATION
D19705	NC	11/19/2009	PENDING	MISSING DATA FOR EACH NOX AND SOX CEMS OPERATIONS DURING THE 2007-2008 COMPLIANCE YEAR. PROVIDE 1)START AND END TIME OF EACH INTERVAL BEYOND MIDNIGHT. 2)REPORTED EMISSIONS FOR EACH INTERVAL. 3) CORRECT EMISSIONS FOR EACH INTERVAL,
P26964	NOV	6/19/2008	INCOMP	DEVICE ID# 670 WAS OPERATED GREATER THAN 20 HOURS IN VIOLATION OF CONDITION C1.68. DEVICE ID# 670 IS AN IC. ENGINE
P26966	NOV	3/12/2009	INCOMP	THE AQMD WAS NOT NOTIFIED OF AN EXCEEDANCE OF THE 500,000 SCF DURING AN UNPLANNED FLARE EVENT WITHIN ONE HOUR.
P26967	NOV	4/2/2009	INCOMP	1) A GAP GREATER THAN 1/2 INCH WAS FOUND AT THE NORTH SIDE OF THE WEST API. 2) EMISSIONS GREATER THAN 500 PPM WERE FOUND AT THE API. 3) FAILURE TO COMPLY WITH ADMINISTRATIVE CONDITION #2 OF SECTION E.
P26969	NOV	3/27/2009	INCOMP	THE PRIMARY SEAL OF TANK 6, DEVICE ID#D549 WAS NOT REPAIRED IN 72 HOURS AND A WRITTEN REPORT OF THE VIOLATION WAS NOT SUBMITTED WITHIN 120 HOURS.
P26970	NOV	7/10/2009	INCOMP	FLARING OCCURRED BECAUSE OF A PREVENTABLE EQUIPMENT FAILURE AT SULFUR RECOVERY PLANT NO. 2
P26972	NOV	7/2/2009	PENDING	INTERNAL COMBUSTION ENGINES EMERGENCY FIRE. D675, D076, D677AND D678 WERE OPERATED GREATER THAN 34 HRS. IN VIOLAITON OF PERMIT TO OPERATE CONDITION C1.75.
P26973	NOV	12/3/2009	PENDING	COMBUSTION IN A FLARE OF VENT GAS WITH A HYDROGEN SULFIDE CONCENTRATION IN EXCESS OF 160

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				PPM AVERAGED OVER 3 HRS.
P48713	NOV	8/19/2008	INCOMP	1) Light service leak in excess of 50,000 ppm - 2 counts, 2) Leak at water separator cover exceeding 500 ppm-13 counts, 3) Waste water separator cover with openings or holes-1 count, 4) Equip. operating contrary to permit cond. & not in good oper. cond.
P48714	NOV	8/20/2008	INCOMP	1) Light service leak of 50,000 ppm or greater - 2 counts, (2) Open end at process line - 1 count, (3) Light liquid leak of 3 drops per minute or more - 1 count, (4) Leak at wastewater separator cover exceeding 500 ppm.
P48715	NOV	8/22/2008	INCOMP	Leak or wastewater separator cover in excess of 500 ppm - 3 counts.

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ATTACHMENTS:

ALL ATTACHMENTS CAN BE FOUND UNDER THE MASTER AN 494396

- I. AO 37 Inhibitor MSDS (A/N 411445)
- II. ConocoPhillips' Permit to Operate No. M57894, A/N 127383
- III. Correspondence with ConocoPhillips regarding Hot Gas Compressor GG-703
- IV. ConocoPhillips' Agreement to Permit Equipment and Conditions (August 10, 2010)